

STATEMENT OF BASIS

Southern Power Company
H. Allen Franklin Generating Plant
Smiths, Alabama
Lee County
206-0036

This proposed renewal to the Title V Major Source Operating Permit is issued under the provisions of ADEM Admin. Code r. 335-3-16. The above-referenced applicant has applied to renew the existing Title V Permit, which was originally issued on July 24, 2006. The applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans and other documents, which were submitted on December 4, 2020 and are attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit.

Southern Power Company (SPC) was issued its existing Major Source Operating Permit (MSOP) on June 8, 2016, with an expiration date of June 7, 2021. Per ADEM Rule 335-3-16-.12(2), an application for permit renewal shall be submitted at least six (6) months, but not more than eighteen (18) months, before the date of expiration of the permit. Based on this rule, the application for renewal was due to the Department no later than December 7, 2020. The application was received on December 4, 2020, and a request for a permit shield was received on February 8, 2021.

The H. Allen Franklin Generating Plant is owned and operated by Southern Power Company and is located in Smiths, Alabama. This facility operates three (3) combined-cycle blocks (Blocks 1, 2, and 3) which each consist of two (2) combustion turbines, two (2) heat recovery steam generators with supplementary firing from a duct burner, and one (1) steam turbine. This arrangement is referred to as a two-on-one configuration. The nominal size of combined-cycle Block 1 is 576 MW, and the nominal size of Blocks 2 and 3 are 636 MW each, for an approximate total of 1,830 MW of electric power. The significant sources of air pollutants at this facility are the following:

- Two (2) 176 MW Natural Gas Fired Combustion Turbines (1A, 1B) each with 335.5 MMBtu/hr Natural Gas Fired Duct Burners and Heat Recovery Steam Generator with Selective Catalytic Reduction NO_x Control.
- Two (2) 176 MW Natural Gas Fired Combustion Turbines (2A, 2B) each with 541.7 MMBtu/hr Natural Gas Fired Duct Burners and Heat Recovery Steam Generator with Selective Catalytic Reduction NO_x Control.
- Two (2) 176 MW Natural Gas Fired Combustion Turbines (3A, 3B) each with 541.7 MMBtu/hr Natural Gas Fired Duct Burners and Heat Recovery Steam Generator with Selective Catalytic Reduction NO_x Control.
- 200 HP Existing Emergency Firewater Pump

Additionally, the applicable requirements of Cross-State Air Pollution Rule (CSAPR) will be included in this renewal.

SPC has requested a permit shield, the specific regulations that SPC has requested a shield from can be found in their application.

Changes being incorporated into the permit during this renewal include an Advanced Gas Path and Mark VI control system upgrades for blocks 1, 2, and 3. A letter stating no permit was required was issued on April 15, 2016 for block 3 and September 29, 2016 for blocks 1 and 2. Compressor blade replacements and control systems updates for blocks 1 and 2 were addressed in letters stating no permits were required issued on September 17, 2020.

Facility-Wide Emissions

Pollutant	Potentials (TPY)	2019 Actuals (TPY)
NO _x	821.1	366.6
CO	3534.4	361.6
VOC	424.6	69.5
SO ₂	39.6	25.8
PM	551.9	70.4
HAPs (total)	20.1	<1
GHG (CO _{2e})	6,839,845	---

Two (2) 176 MW Combined Cycle Units (1A, 1B)

The combined cycle units (combustion turbine and duct burner) fire only pipeline natural gas. Each combustion turbine and each steam generator has the capability to generate electric power of approximately 176 MW and 224 MW, respectively. Each unit's duct burner has a heat input rating of 335.5 MMBtu/hr and provides the capability to produce additional steam from each heat recovery steam generator (HRSG). The NO_x emissions from the combined cycle combustion turbines are controlled by the use of Selective Catalytic Reduction (SCR).

The combined cycle units were subject to a Prevention of Significant Deterioration (PSD) Review in which BACT was established for NO_x, CO, VOC, SO₂, H₂SO₄, and PM. The combustion turbines are subject to the Federal New Source Performance Standards (NSPS) contained in 40 CFR Part 60, Subpart GG, and the duct burners are subject to NSPS, Subpart Da. The combined cycle units are also subject to the Acid Rain Program and the Cross-State Air Pollution Rule (CSAPR). The combined cycle units' expected emissions and the associated standards are listed below.

Emission Standards

Opacity:

- Visible Emissions from each of the combined cycle/duct burner stacks shall not exceed 10%.

(ADEM Admin. Code r. 335-3-14-.04(9)(b)) BACT

- Visible Emissions from each of the combined cycle/duct burner stacks shall not exceed 20%, except one 6-minute period per hour of $\leq 27\%$.

(ADEM Admin. Code r. 335-3-10-.02(2)(a), 40 CFR 60.42a)

Particulate Matter (PM):

- Particulate emissions from each of the combined cycle/duct burner stacks shall not exceed 0.009 lb/MMBtu and 20.0 lb/hr.

(ADEM Admin. Code r. 335-3-14-.04(9)(b)) BACT

- Particulate emissions from each of the duct burners shall not exceed 0.03 lb/MMBtu.

(ADEM Admin. Code r. 335-3-10-.02(2)(a), 40 CFR 60.42a)

The PM emission standards apply at all times except during startup, shutdown, and load change; at which times the Permittee shall comply with work practice standards.

Sulfur Dioxide (SO₂):

- Sulfur Dioxide emissions from each of the combined cycle/duct burner stacks shall not exceed 0.0006 lb/MMBtu and 1.50 lb/hr.

(ADEM Admin. Code r. 335-3-14-.04(9)(b)) BACT

- Sulfur Dioxide emissions from each of the duct burners shall not exceed 0.20 lb/MMBtu.

(ADEM Admin. Code r. 335-3-10-.02(2)(a), 40 CFR 60.43a)

- Sulfur Dioxide emissions from each of the combustion turbines shall not exceed 0.015% by volume at 15% O₂ on a dry basis or sulfur content of fuels burned in the combustion turbines shall not exceed 0.8% by weight.

(ADEM Admin. Code r. 335-3-10-.02(33), 40 CFR 60.333)

- The combined cycle units are subject to the Acid Rain Regulations. These units are not allocated SO₂ allowances under Phase II of the Acid Rain Program. (These units shall hold sufficient allowances in the unit account to cover annual SO₂ emissions.

(ADEM Admin. Code r. 335-3-18-.01 and 40 CFR Part 73)

Nitrogen Oxides (NO_x):

- Nitrogen Oxides emissions from each of the combined cycle/duct burner stacks shall not exceed 0.013 lb/MMBtu and 29.7 lbs/hr (3-hr rolling average).

(ADEM Admin. Code r. 335-3-14-.04(9)(b)) BACT

- Nitrogen Oxides emissions from each of the combustion turbines shall not exceed 107 ppmv (4-hr rolling average), 75 ppmv adjusted for heat rate and fuel bound nitrogen.

(ADEM Admin. Code r. 335-3-10-.02(33), 40 CFR 60.332)

- Nitrogen Oxides emissions from each of the duct burners shall not exceed 1.6 lb/MWh (30-day rolling average).

(ADEM Admin. Code r. 335-3-10-.02(2)(a), 40 CFR 60.44a)

The NO_x emission standards apply at all times except during startup, shutdown, and load change; at which times the Permittee shall comply with work practice standards.

Carbon Monoxide (CO):

- Carbon Monoxide emissions from each of the combined cycle/duct burner stack shall not exceed 0.061 lb/MMBtu and 138.7 lbs/hr.
(ADEM Admin. Code r. 335-3-14-04(9)(b) BACT

The CO emission standards apply at all times except during startup, shutdown, and load change; at which times the Permittee shall comply with work practice standards.

Volatile Organic Compounds (VOC):

- Volatile Organic Compounds emissions from each of the combined cycle/duct burner stack shall not exceed 0.008 lb/MMBtu and 17.0 lbs/hr.

(ADEM Admin. Code r. 335-3-14-04(9)(b) BACT

The VOC emission standards apply at all times except during startup, shutdown, and load change; at which times the Permittee shall comply with work practice standards.

Sulfuric Acid Mist:

- Sulfuric Acid Mist emissions from each of the combined cycle/duct burner stack shall not exceed 9.19×10^{-5} lb/MMBtu and 0.22 lbs/hr.

(ADEM Admin. Code r. 335-3-14-04(9)(b) BACT

Expected Emissions

Particulate Matter (PM) and Opacity:

- During initial compliance testing, the particulate emission rates from the units were below the permitted allowable limits. The following are the emission rates from each of the combined combustion turbine/duct burner stacks during initial performance testing:

Unit	PM (lb/MMBtu)	PM (lb/hr)
1A	0.0013	3.1
1B	0.0037	8.4

No opacity would be expected from these units since they may only burn natural gas.

Sulfur Dioxide (SO₂) and Sulfuric Acid Mist:

- Natural gas is the only fuel utilized by these units. As indicated in AP42, expected emissions would be approximately 0.0006 lb/MMBtu (0.6 lb/10⁶ scf for duct burner firing/indirect firing). The sulfur content of natural gas should also be much lower than the NSPS, Subpart GG, limit of 0.8% by weight. Initial performance testing for sulfuric acid mist was not required.

Nitrogen Oxides (NO_x):

- During initial compliance testing, the NO_x emission rates from the units were below the permitted allowable limits. The following are the emission rates from each of the combined combustion turbine/duct burner stacks during initial performance testing:

Unit	NO _x (lb/MMBtu)	NO _x (lb/hr)
1A	0.0078	18.7
1B	0.0089	20.2

- The unit is required to monitor NO_x with a Continuous Emissions Monitoring System (CEMS). CEMS data indicates that NO_x emissions from the combined cycle/duct burner are below the permitted emission limits.

Carbon Monoxide (CO):

- During initial compliance testing, the CO emission rates from the units were below the permitted allowable emissions limits. The following are the emission rates from each of the combined combustion turbine/duct burner stacks during initial performance testing:

Unit	CO (lb/MMBtu)	CO (lb/hr)
1A	0.0157	37.4
1B	0.0081	18.2

Volatile Organic Compounds (VOC):

- During initial compliance testing, the VOC emission rates from the units were below the permitted allowable limits. The following are the emission rates from each of the combined combustion turbine/duct burner stacks during initial performance testing:

Unit	VOC (lb/MMBtu)	VOC (lb/hr)
1A	0.0011	2.6
1B	0.0027	6.1

Green House Gases (GHG):

- The facility reported potential emissions of 6,839,845 tons of GHG. This total is based on EPA's Global Warming Potentials (GWP).

Periodic Monitoring and CAM

Particulate Matter (PM) and Opacity:

- Based on the low expected levels of emissions, periodic monitoring of opacity and particulate matter emissions is not considered necessary. Additionally, the only control device for the CT is an SCR that is only used to control NO_x emissions; therefore, CAM is not applicable to PM and Opacity.

Sulfur Dioxide (SO₂):

- This unit is not allocated annual SO₂ allowances through the Acid Rain Program. However, they must hold enough allowances to cover their annual SO₂ emissions. The provisions in 40 CFR 75 are utilized to track annual SO₂ emissions. Additionally, the only control device for the CT is an SCR that is only used to control NO_x emissions; therefore, CAM is not applicable to SO₂.

Nitrogen Oxides (NO_x):

- This unit is required by 40 CFR Part 75 to maintain and operate a NO_x Continuous Emissions Monitoring System (CEMS). The NO_x CEMS will be utilized for periodic monitoring of NO_x emissions.

- The only pollutant subject to Compliance Assurance Monitoring (CAM) is NO_x since the unit is utilizing a control device, SCR, to meet an applicable limit, and the pre-controlled potential NO_x emissions from the units are greater than 100 TPY. Even though other pollutants' potential emissions are greater than the respective major source threshold, no control devices are used to meet any applicable limitations; therefore, CAM does not apply to those pollutants.
- This unit is required by 40 CFR Part 75 to maintain and operate a NO_x Continuous Emissions Monitoring System (CEMS). The CEMS will also serve as the compliance assurance monitoring for NO_x. Details of the CAM Plan are attached to this document.

Carbon Monoxide (CO) and Volatile Organic Compounds (VOC):

- Based on the low expected levels of emissions, periodic monitoring of CO and VOC emissions is not considered necessary. Additionally, the only control device for the CT is an SCR that is only used to control NO_x emissions; therefore, CAM is not applicable to VOC and CO.

Record Keeping and Reporting

- Records of operation of each combined cycle unit while in power augmentation mode shall be kept in a form suitable for inspection for a period of at least five years following said recording.

(ADEM Admin. Code r. 335-3-14-04) BACT

- Records documenting the load at which the turbines operate shall be maintained in a form suitable for inspection for a period of at least five years following said recording.

(ADEM Admin. Code r. 335-3-14-04) BACT

- Records of startup and shutdown periods shall be maintained in a form suitable for inspection for a period of at least five years following said recording.

(ADEM Admin. Code r. 335-3-14-04) BACT

- An emission report as defined by 40 CFR 60.7(c) shall be submitted to the Department within 30 days of the end of the calendar quarter.

(ADEM Admin. Code r. 335-3-16-.05(c) and 335-3-1-.04)

Cross-State Air Pollution Rule

- These units are subject to the applicable provisions of Cross-State Air Pollution Rule (CSAPR) to include all applicable provisions of the SO₂ Group 2 Trading Program requirements.

(ADEM Admin. Code r. 335-3-5-.06 through 335-3-5-.36)

- These units are subject to the applicable provisions of Cross-State Air Pollution Rule (CSAPR) to include all applicable provisions of the NO_x Annual Trading Program requirements.

(ADEM Admin. Code r. 335-3-8-.07 through 335-3-8-.70)

Four (4) 176 MW Combined Cycle Units (2A, 2B, 3A, 3B)

The combined cycle units (combustion turbine and duct burner) fire only pipeline natural gas. Each combustion turbine and each steam generator has the capability to generate electric power of approximately 176 MW and 284 MW, respectively. Each unit's duct burner has a heat input rating of 541.7 MMBtu/hr and provides the capability to produce additional steam from each heat recovery steam generator (HRSG). The NO_x emissions from the combined cycle combustion turbines are controlled by the use of Selective Catalytic Reduction (SCR).

The combined cycle units were subject to a Prevention of Significant Deterioration (PSD) Review in which BACT was established for NO_x, CO, VOC, SO₂, H₂SO₄, and PM. The combustion turbines are subject to the Federal New Source Performance Standards (NSPS) contained in 40 CFR Part 60, Subpart GG, and the duct burners are subject to NSPS, Subpart Da. The combined cycle units are also subject to the Acid Rain Program and the Cross-State Air Pollution Rule (CSAPR). The combined cycle units' expected emissions and the associated standards are listed below.

Emission Standards

Opacity:

- Visible Emissions from each of the combined cycle/duct burner stacks shall not exceed 10%.

(ADEM Admin. Code r. 335-3-14-.04(9)(b)) BACT

- Visible Emissions from each of the combined cycle/duct burner stacks shall not exceed 20%, except one 6-minute period per hour of ≤27%.

(ADEM Admin. Code r. 335-3-10-.02(2)(a), 40 CFR 60 Subpart Da)

Particulate Matter (PM):

- Particulate emissions from each of the combined cycle/duct burner stacks shall not exceed 0.009 lb/MMBtu and 21.5 lb/hr.

(ADEM Admin. Code r. 335-3-14-.04(9)(b)) BACT

- Particulate emissions from each of the duct burners shall not exceed 0.03 lb/MMBtu.

(ADEM Admin. Code r. 335-3-10-.02(2)(a), 40 CFR 60.42a)

The PM emission standards apply at all times except during startup, shutdown, and load change; at which times the Permittee shall comply with work practice standards.

Sulfur Dioxide (SO₂):

- Sulfur Dioxide emissions from each of the combined cycle/duct burner stacks shall not exceed 0.0006 lb/MMBtu and 1.60 lb/hr.

(ADEM Admin. Code r. 335-3-14-.04(9)(b)) BACT

- Sulfur Dioxide emissions from each of the duct burners shall not exceed 0.20 lb/MMBtu.

(ADEM Admin. Code r. 335-3-10-.02(2)(a), 40 CFR 60.43a)

- Sulfur Dioxide emissions from each of the combustion turbines shall not exceed 0.015% by volume at 15% O₂ on a dry basis or sulfur content of fuels burned in the combustion turbines shall not exceed 0.8% by weight.

(ADEM Admin. Code r. 335-3-10-.02(33), 40 CFR 60.333)

- The combined cycle units are subject to the Acid Rain Regulations. These units are not allocated SO₂ allowances under Phase II of the Acid Rain Program. These units shall hold sufficient allowances in the unit account to cover annual SO₂ emissions.

(ADEM Admin. Code r. 335-3-18-.01 and 40 CFR Part 73).

Nitrogen Oxides (NO_x):

- Nitrogen Oxides emissions from each of the combined cycle/duct burner stacks shall not exceed 0.013 lb/MMBtu and 32.0 lbs/hr (3-hr rolling average).

(ADEM Admin. Code r. 335-3-14-.04(9)(b)) BACT

- Nitrogen Oxides emissions from each of the combustion turbines shall not exceed 107 ppmv (4-hr rolling average), 75 ppmv adjusted for heat rate and fuel bound nitrogen.

(ADEM Admin. Code r. 335-3-10-.02(33), 40 CFR 60.332)

- Nitrogen Oxides emissions from each of the duct burners shall not exceed 1.6 lb/MWh (30-day rolling average).

(ADEM Admin. Code r. 335-3-10-.02(2)(a), 40 CFR 60.44a)

The NO_x emission standards apply at all times except during startup, shutdown, and load change; at which times the Permittee shall comply with work practice standards.

Carbon Monoxide (CO):

- Carbon Monoxide emissions from each of the combined cycle/duct burner stack shall not exceed 0.075 lb/MMBtu and 184.2 lbs/hr during power augmentation and 0.052 lb/MMBtu & 125.7 lbs/hr during non-power augmentation.

(ADEM Admin. Code r. 335-3-14-04(9)(b) BACT

The CO emission standards apply at all times except during startup, shutdown, and load change; at which times the Permittee shall comply with work practice standards.

Volatile Organic Compounds (VOC):

- Volatile Organic Compounds emissions from each of the combined cycle/duct burner stack shall not exceed 0.011 lb/MMBtu and 25.2 lbs/hr during power augmentation and 0.006 lb/MMBtu & 14.5 lbs/hr during non-power augmentation.

(ADEM Admin. Code r. 335-3-14-04(9)(b) BACT

The VOC emission standards apply at all times except during startup, shutdown, and load change; at which times the Permittee shall comply with work practice standards.

Sulfuric Acid Mist:

- Sulfuric Acid Mist emissions from each of the combined cycle/duct burner stack shall not exceed 9.19×10^{-5} lb/MMBtu and 0.23 lbs/hr.

(ADEM Admin. Code r. 335-3-14-04(9)(b) BACT

Expected Emissions

Particulate Matter (PM) and Opacity:

- During initial compliance testing, the particulate emission rates from the units were below the permitted allowable limits. The following are

the emission rates from each of the combined combustion turbine/duct burner stacks during initial performance testing.

Unit	PM (lb/MMBtu)	PM (lb/hr)
2A	0.0011	1.71
2B	0.0011	1.85
3A	0.002	5.46
3B	0.001	3.28

No opacity would be expected from these units since they may only burn natural gas.

Sulfur Dioxide (SO₂) and Sulfuric Acid Mist:

- Natural gas is the only fuel utilized by these units. As indicated in AP-42, expected emissions would be approximately 0.0006 lb/MMBtu (0.6 lb/10⁶ scf for duct burner firing/indirect firing). The sulfur content of natural gas should also be much lower than the NSPS, Subpart GG, limit of 0.8% by weight. Initial performance testing for sulfuric acid mist was not required.

Nitrogen Oxides (NO_x):

- During initial compliance testing, the NO_x emission rates from the units were below the permitted allowable limits. The following are the emission rates from each of the combined combustion turbine/duct burner stacks during initial performance testing:

Unit	NO _x (lb/MMBtu)
2A	0.0061
2B	0.0059
3A	0.008
3B	0.006

- The unit is required to monitor NO_x with a Continuous Emissions Monitoring System (CEMS). CEMS data indicates that NO_x emissions from the combined cycle/duct burner are below the permitted emission limits.

Carbon Monoxide (CO):

- During initial compliance testing, the CO emission rates from the units were below the permitted allowable emissions limits. The following are the emission rates from each of the combined combustion turbine/duct burner stacks during initial performance testing:

Unit	CO (lb/MMBtu) ¹	CO (lb/MMBtu) ²
2A	0.0050	0.0004
2B	0.0040	0.0003
3A	0.010	0.002
3B	0.008	0.002

1: Power augmentation

2: Non-power augmentation

Volatile Organic Compounds (VOC):

- During initial compliance testing, the VOC emission rates from the units were below detection levels during operation while in both power and non-power augmentation modes.

Green House Gases (GHG):

- The facility reported potential emissions of 6,839,845 tons of GHG. This total is based on EPA's Global Warming Potentials (GWP).

Periodic Monitoring and CAM

Particulate Matter (PM) and Opacity:

- Based on the low expected levels of emissions, periodic monitoring of opacity and particulate matter emissions is not considered necessary. Additionally, the only control device for the CT is an SCR that is only used to control NO_x emissions; therefore, CAM is not applicable to PM and Opacity.

Sulfur Dioxide (SO₂) and Sulfuric Acid Mist:

- This unit is not allocated annual SO₂ allowances through the Acid Rain Program. However, they must hold enough allowances to cover their annual SO₂ emissions. The provisions in 40 CFR 75 are utilized to track annual SO₂ emissions. Periodic monitoring for sulfuric acid mist is not considered necessary due to the expected level of emissions from natural gas combustion. Additionally, the only control device for the CT is an SCR that is only used to control NO_x emissions; therefore, CAM is not applicable to SO₂ or sulfuric acid mist.

Nitrogen Oxides (NO_x):

- This unit is required by 40 CFR Part 75 to maintain and operate a NO_x Continuous Emissions Monitoring System (CEMS). The NO_x CEMS will be utilized for periodic monitoring of NO_x emissions.
- The only pollutant subject to Compliance Assurance Monitoring (CAM) is NO_x since the unit is utilizing a control device, SCR, to meet

an applicable limit, and the pre-controlled potential NO_x emissions from the units are greater than 100 TPY. Even though other pollutants' potential emissions are greater than the respective major source threshold, no control devices are used to meet any applicable limitations; therefore, CAM does not apply to those pollutants.

- This unit is required by 40 CFR Part 75 to maintain and operate a NO_x Continuous Emissions Monitoring System (CEMS). The CEMS will also serve as the compliance assurance monitoring for NO_x. Details of the CAM Plan are attached to this document.

Carbon Monoxide (CO) and Volatile Organic Compounds (VOC):

- Based on the low expected levels of emissions, periodic monitoring of CO and VOC emissions is not considered necessary. Additionally, the only control device for the CT is an SCR that is only used to control NO_x emissions; therefore, CAM is not applicable to VOC and CO.

Record Keeping and Reporting

- Records of operation of each combined cycle unit while in power augmentation mode shall be kept in a form suitable for inspection for a period of at least five years following said recording.

(ADEM Admin. Code r. 335-3-14-04) BACT

- Records documenting the load at which the turbines operate shall be maintained in a form suitable for inspection for a period of at least five years following said recording.

(ADEM Admin. Code r. 335-3-14-04) BACT

- Records of startup and shutdown periods shall be maintained in a form suitable for inspection for a period of at least five years following said recording.

(ADEM Admin. Code r. 335-3-14-04) BACT

- An emission report as defined by 40 CFR 60.7(c) shall be submitted to the Department within 30 days of the end of the calendar quarter.

(ADEM Admin. Code r. 335-3-16-.05(c) and 335-3-1-.04)

Cross-State Air Pollution Rule

- These units are subject to the applicable provisions of Cross-State Air Pollution Rule (CSAPR) to include all applicable provisions of the SO₂ Group 2 Trading Program requirements.

(ADEM Admin. Code r. 335-3-5-.06 through 335-3-5-.36)

- These units are subject to the applicable provisions of Cross-State Air Pollution Rule (CSAPR) to include all applicable provisions of the NO_x Annual Trading Program requirements.

(ADEM Admin. Code r. 335-3-8-.07 through 335-3-8-.70)

Existing Emergency Fire Water Pump

This emergency generator is classified as compression ignition emergency generator, because they are fueled by diesel fuel. This emergency generator is subject to the applicable requirements in 40 CFR Part 63 Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE)) and 40 CFR Part 60 Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines). The following emergency generators are considered NSPS Subpart IIII – compression ignition emergency generators:

<u>Description</u>	<u>HP</u>
Emergency Fire Water Pump	200

MACT Subpart ZZZZ:

- These units do not have to meet the requirements of Subpart ZZZZ or 40 CFR Part 63 Subpart A except for the initial notification requirements of §63.6645(f).

(40 CFR Part 63 Subpart ZZZZ, §63.6590(b)(1)(i))

Emission Standards:

NSPS Subpart IIII:

- These units are subject to the applicable emission standards listed in Table 2 or Table 4 of 40 CFR Part 60 Subpart IIII and 40 CFR §60.4202(a)(2).

(40 CFR Part 60 Subpart IIII, §60.4205(b) and §60.4205(c))

- These units must be certified according to 40 CFR Part 60 Subpart IIII for the same model year and maximum engine power.

(40 CFR Part 60 Subpart IIII, §60.4205(b))

- These units must be installed and configured according to the manufacturer's specifications.

(40 CFR Part 60 Subpart IIII, §60.4211(a) & §60.4211(b))

- The facility must operate and maintain these units according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.

(40 CFR Part 60 Subpart IIII, §60.4206)

- These units must use diesel fuel that meets the requirements of 40 CFR §80.510(b).

(40 CFR Part 60 Subpart IIII, §60.4207(b))

- The Permittee must install a non-resettable hour meter prior to startup of the engines.

(40 CFR Part 60 Subpart IIII, §60.4209(a))

- These units may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of these units are limited to 100 hours per year. There is no time limit on the use of these units in emergency situations. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. These units may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50

hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply non-emergency power as part of a financial arrangement with another entity. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in 40 CFR 60 Subpart IIII, is prohibited.

(40 CFR Part 60 Subpart IIII, §60.4211(f))

Expected Emissions:

The expected emissions are based on AP-42 emission factors, manufacturer's certifications, and a maximum operation of 500 hours per year. The expected emissions of one of the generators is shown below:

Pollutant	lb/hr	TPY
PM ₁₀ /PM _{2.5}	0.049	0.012
SO ₂	0.42	0.105
NO _x	1.09	0.273
CO	0.526	0.132
VOC	0.033	0.008

CAM:

- These sources are uncontrolled; therefore, CAM does not apply.

Periodic Monitoring, Recordkeeping, & Reporting:

- Based on the low level of expected emissions from these sources, the sources are not subject to any additional monitoring or recordkeeping and reporting requirements other than those listed in the general provisos.

Recommendation:

Based on the above analysis and pending the resolution of any comments received during the 30-day public comment period and 45-day EPA review, I recommend issuing the attached renewal MSOP for Southern Power-Plant H. Allen Franklin.



Tyler Phillips
Industrial Minerals Section
Energy Branch
Air Division

February 25, 2021
Date